

**BY ORDER OF THE CHIEF,
NATIONAL GUARD BUREAU**



MANPOWER STANDARD 233ISO

1 DECEMBER 2004

Manpower Standard

GUIDANCE AND CONTROL EC-130E (RIVET RIDER)

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This Air National Guard Manpower Standard (ANGMS) quantifies the manpower required to accomplish the tasks described in the process oriented description (POD) for varying levels of workload in the Guidance and Control EC-130E (Rivet Rider). This ANGMS applies to the Guidance and Control EC-130E, Rivet Rider mission only, at the 193rd SOW, PA. This standard applies to peacetime operations only. The Air National Guard (ANG) is the authority for the approval and publication of ANG Manpower Standards. Air Force (AF) and ANG directives contain policy and procedural guidance for the operation of the Rivet Rider function. This standard was developed in accordance with AF Instruction (AFI) 38-201, *Determining Manpower Requirements*, and AF Manual (AFMAN) 38-208, Volume 1, *Air Force Management Engineering Program (MEP) - Processes*, and AFMAN 38-208, Volume 2, *Air Force Management Engineering Program (MEP) - Quantification Tools*. Send comments and suggested improvements on AF IMT 847, *Recommendation for Change of Publication*, through channels, to ANG, Management Engineering Branch (ANG/XPME/Operating Location TN [OLTN]), 106 Briscoe Drive, McGhee Tyson ANG Base TN 37777-6283.

1. STANDARD DATA:

1.1. Approval Date. 1 December 2004

1.2. Man-hour Data Source. Operational Audit method (historical record and technical estimate techniques).

1.3. Standard Man-hour Equation. $Y = 216.7 + 1.510X1 + 14.20X2$.

1.4. Workload Factor:

1.4.1. Titles:

1.4.1.1. X1 = A Programmed Flying Hour.

1.4.1.2. X2 = A Primary Aircraft Inventory.

1.4.2. Definition.

1.4.2.1. X1 = Monthly number of flying hours programmed.

1.4.2.2. X2 = Average monthly primary aircraft inventory.

1.4.3. Source. USAF Program Document (PD), Volume II maintained by ANG/XPPI.

1.4.4. Points of Contact:

1.4.4.1. Functional: Lt Col Robert Hoback, ANG/LGY.

1.4.4.2. Manpower: Mr. Steve Griffith, Chief, ANG/XPME, Management Engineering Branch.

2. APPLICATION INSTRUCTIONS:

2.1. Step 1. Man-hour Equation. Apply the man-hour equation in paragraph 1.3., to determine required man-hours.

2.2. Step 2. Man-hour Availability Factor (MAF). Divide the resulting man-hours by the appropriate MAF times the overload factor.

2.3. Step 3. Upper and Lower Extrapolation Limits:

2.3.1. $Y_U = 683.43$.

2.3.2. $Y_L = 410.07$.

2.4. Step 4. Air Force Specialty Codes (AFSC) Requirement. Use the Manpower Table attachment 3 to determine required AFSCs.

3. STATEMENT OF CONDITIONS. The conditions listed below had no affect on the development of this standard: minimum response rates, minimum manpower levels, standardized crew complements, safety considerations, aircraft turn-around time, length of waiting periods, levels of backlog and hours of operation.

DANIEL JAMES III, Lieutenant General, USAF
Director, Air National Guard

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 38-201, *Determining Manpower Requirements*

AFMAN) 38-208, Volume 1, *Air Force Management Engineering Program (MEP)-Processes*

AFMAN 38-208, Volume 2, *Air Force Management Engineering Program (MEP) - Quantification Tools*

Abbreviations and Acronyms

AF -- Air Force

AFI -- Air Force Instruction

AFMS --Air Force Manpower Standard

AFSC -- Air Force Specialty Codes

AFTO -- Air Force Technical Order

ANG -- Air National Guard

ANGI -- Air National Guard Instruction

ANGMS -- Air National Guard Manpower Standard

APU -- Auxiliary Power Unit

BDHI -- Bearing Distance Heading Indicator

FMB -- Financial Management Board

MEP -- Management Engineering Program

POD -- Process Oriented Description

TCTO -- Time Compliance Technical Order

UTA -- Unit Training Assembly

Terms

Air National Guard Manpower Standard (ANGMS)--A numbered, specialized publication that quantifies manpower requirements for a work center. Also includes approved variances. See AFI 38-201.

Man-hour--A unit of measuring work. It is equivalent to one person working at a normal pace for 60 minutes, two people working at a normal pace for 30 minutes, or a similar combination of people working at a normal pace for a period to time equal to 60 minutes.

Manpower Standard--The basic tool used to determine the minimum level of manpower required to support a function. It is a quantitative expression that represents a work center's man-hour requirements in response to varying levels of workload.

Process Oriented Description--A format that shows work center responsibilities structured for easy measurement of work categories, tasks and subtasks.

ATTACHMENT 2

PROCESS ORIENTED DESCRIPTION
GUIDANCE AND CONTROL

Table A2.1. Listing of Functional Process.

TASK NO.	PROCESS
1.	ON-EQUIPMENT MAINTENANCE.
1.1.	MAINTAINS AVIONICS AIRCRAFT SYSTEM AND COMPONENT. Inspects, troubleshoots, repairs, and documents on-equipment.
1.1.1.	MAINTAINS TURBO PROPELLER POWER PLANT.
1.1.2.	MAINTAINS INSTRUMENTS.
1.1.3.	MAINTAINS AUTOPILOT.
1.1.4.	MAINTAINS RADIO NAVIGATION.
1.1.5.	MAINTAINS FUEL SYSTEM.
1.1.6.	MAINTAINS ACCIDENT INVESTIGATION RECORDING SYSTEM.
1.1.7.	MAINTAINS APU INDICATING SYSTEM.
1.1.8.	MAINTAINS HYDRAULIC PNEUMATIC POWER SUPPLY.
1.1.9.	MAINTAINS MISCELLANEOUS COMPONENT.
1.2.	PERFORMS INSPECTION. Performs special, phase and hourly aircraft inspection.
1.2.1.	PERFORMS SPECIAL/ONE TIME INSPECTION.
1.2.2.	PERFORMS PHASE/HOURLY INSPECTION.
1.2.2.1.	PERFORMS AIRCRAFT MAJOR INSPECTION.
1.2.2.2.	PERFORMS AIRCRAFT FIRST MINOR INSPECTION.
1.2.2.3.	PERFORMS AIRCRAFT SECOND MINOR INSPECTION.
1.2.2.4.	PERFORMS AIRCRAFT THIRD MINOR INSPECTION.
1.2.2.5.	PERFORMS PERISCOPE FOR EQUIPMENT INSPECTION.
1.2.2.6.	PERFORMS BDHI INSPECTION.
2.	OFF-EQUIPMENT.
2.1.	MAINTAINS TURBO PROPELLER POWER PLANT.
2.2.	MAINTAINS INSTRUMENTS.

2.3.	MAINTAINS AUTO PILOT.
3.	MAGNETIC SURVEY OF COMPASS ROSE. Performs annual check of compass rose to ensure that the area meets technical order specification.
4.	TIME COMPLIANCE TECHNICAL ORDER (TCTO). Performs maintenance-required on/off the aircraft in accordance with applicable TCTO and complete documentation. Documents aircraft 781s.
5.	TECHINICAL DATA SUBACCOUNT MAINTENANCE. Receives and posts technical data associated with shop system.
6.	PERIODIC MAINTENANCE OF AVIONICS EQUIPMENT IN BASE SUPPLY. Performs functional checks or calibration of equipment stored in Base Supply.
7.	GROUND HANDLING.
8.	BENCH SET AND MOCK-UP MAINTENANCE. Inspects, aligns, and repairs bench set mock-up and sub-system component.
9.	TORQUE WRENCH CALIBRATION. Processes, inspects, and calibrates all the torque wrenches.
10.	AIRCREW DEBRIEFING. Conducts or attends aircrew debriefing.
11.	MAINTENANCE AUTOMATED DOCUMENTATION SYSTEM.
12.	HAZARDOUS WASTE PROGRAM MANAGEMENT.
12.1.	PROCESS HAZARDOUS WASTE. Identifies, labels, contains, and disposes of hazardous waste.
12.2.	MAINTAINS COLLECTION FACILITY. Maintains hazardous waste accumulation point, satellite collection area, and container.
12.3.	MAINTAINS PROTECTIVE EQUIPMENT. Inspects and maintains protective equipment.
13.	SHOP GENERAL SUPPORT.
14.	ASSISTANCE. Assists other Maintenance functions in the performance of direct labor maintenance requirement to ensure the effective utilization of maintenance personnel.
15.	FOREIGN OBJECT DAMAGE WALK/INSPECTION. Performs walk around the maintenance complex and flight line for debris.
16.	BENCH STOCK MAINTENANCE. Inspects, orders, stocks, and issues bench stock.
17.	SPECIAL PLANNING OR SCHEDULING.

17.1.	PREPARES FOR UNIT TRAINING ASSEMBLY. Performs planning/scheduling, clean up, all associated tasks for UTA preparation.
17.2.	PREPARES FOR MOBILITY/DEPLOYMENT PARTICIPATION. Performs mobility and deployment planning/scheduling, clean up, all associated tasks, duties, and responsibilities.
17.3.	PREPARES FOR SPECIAL PROGRAMS. Prepares and performs special program tasks, duties, and responsibilities levied by Warner-Robbins, Major Air Commands, the Air National Guard Readiness Center or National Guard Bureau.
18.	TRAVEL. Travels to recover possessed aircraft.
19.	INDIRECT. Indirect work involves those tasks that are not readily identifiable with the work center's specific product or service. The major categories of standard indirect work are: Administers Civilian, Officer, and Enlisted Personnel; Directs Work Center Activity; Provides Administrative Support; Prepares for and Conducts/Attends Meeting; Administers Training; Manages Supplies; Maintains Equipment; and Performs Cleanup.

Attachment 3

MANPOWER TABLE

Table A3.1. Standard Manpower Table.

Work Center	Air Force Specialty Title	AFSC	Manpower Requirement							
Avionics Guidance and Control	Integrated Avionics Systems	2A5X3	3	4	5					
Total			3	4	5					

Note. AFSCs may be adjusted at the discretion of the Commander.